

# Surface Water Intake Protection

Upper Mississippi River Forum

# Surface Water Intake Protection Background

- 1996 Amendments to the Safe Drinking Water Act required MDH to prepare Source Water Assessment (SWA).
- Outgrowth of SWA.
- Requested by public water suppliers.
- Not mandatory in MN.
- Minnesota Department of Health convened a workgroup.
- Report release early 2004.
- Needs to be revised.

# Goals of SWP Planning

- Provide a consistent and agreed upon methodology for Minnesota.
- Identify drinking water goals and management strategies that can be integrated into existing plans and programs.
- Include public participation in plan development and implementation.

# Multi-Barrier Approach

- Standards and Treatment.
- Distribution of the Water.
- User Information.
- Prevention – Source Water Protection.

# Why Emphasize Prevention?

- More effective and cost-efficient.
- Protect large community investment in public water supply system, which is needed for growth and development.
- Protect public health from short-term or long-term effects of consuming contaminated drinking water.

# Meaning of Source Water Protection(SWP)

- Measures have been implemented or are in the process of being implemented to reduce the risk of potential contamination of the source water.

# Goals of SWP

- Address acute and chronic health.
- Implementation buy-in.
- Cost-effectiveness.
- Sustainable source water resource.
- Pollutant reduction.

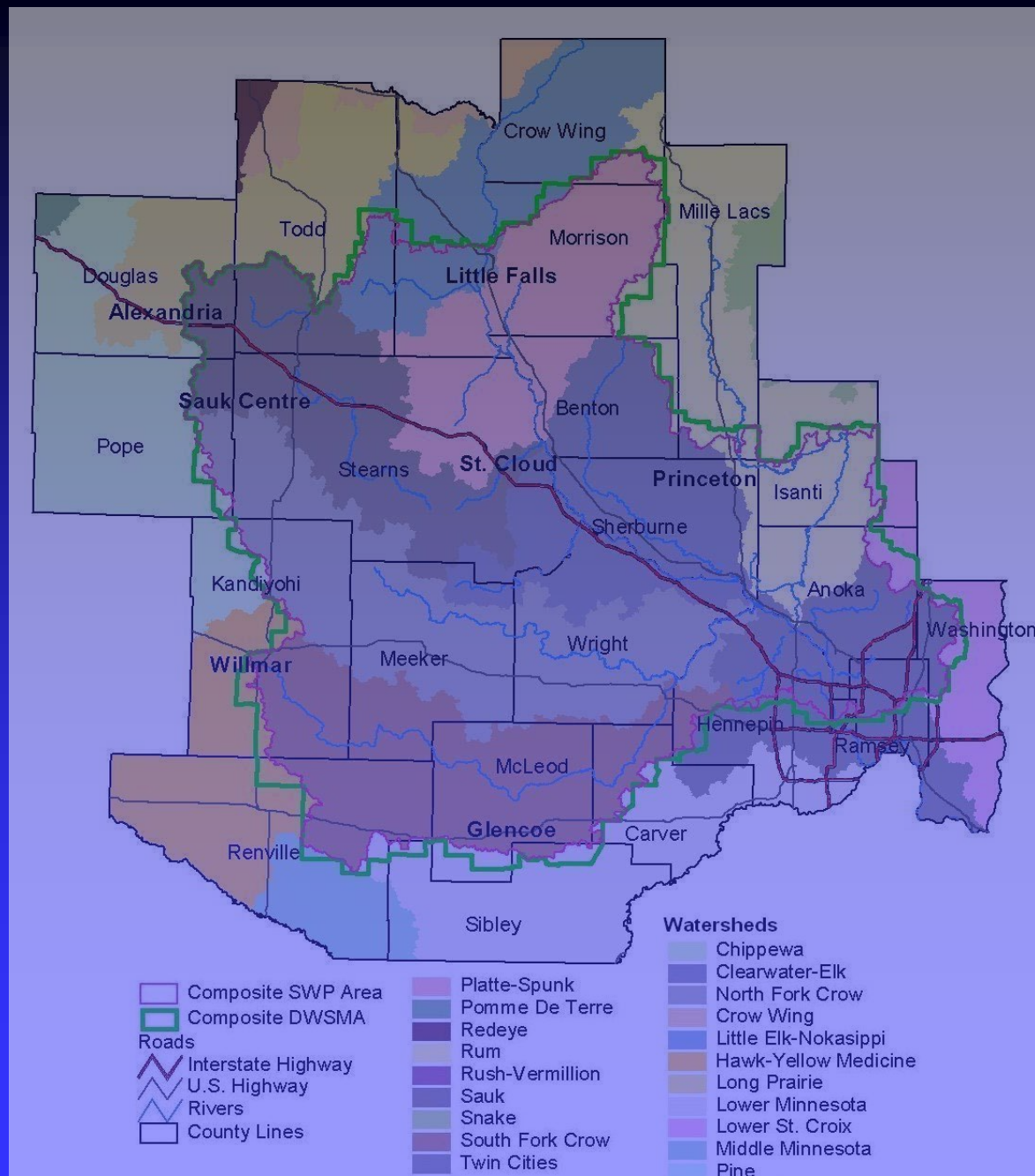
# Surface Water Intake Protection Plan

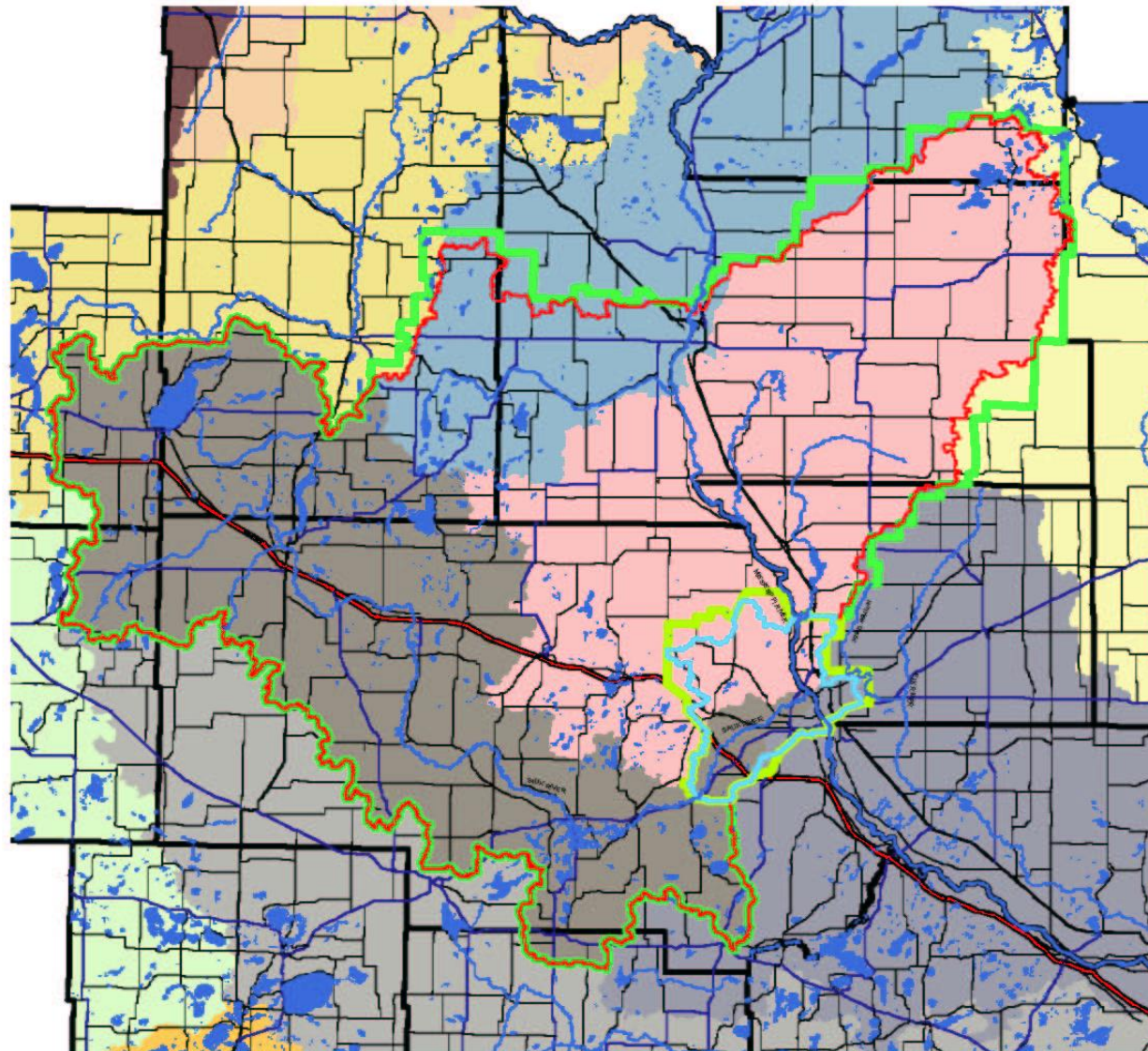
- A document which includes:
  - ◆ delineation of the SWPA and DWSMA.
  - ◆ an assessment of the system's sensitivity and susceptibility to contamination.
  - ◆ description of potential contaminant sources,
  - ◆ identification of management strategies to prevent the contamination of the source water.



# Current Status

- Pilot Project with Minneapolis, St. Paul and St. Cloud have been endorsed by MDH.





**St. Cloud Priority A & B Source  
Water Protection Areas**  
(February 2005)

- Rivers
- Lakes
- Priority A Source Water Protection Area
- Priority B Source Water Protection Area
- DWSMA (A)
- DWSMA (B)
- Roads**
  - Interstate Highway
  - U.S. Highway
  - MN Highway
  - CSAH
- County Lines
- Watersheds**
  - Chippewa
  - Clearwater-Elk
  - North-Fork-Crow
  - Crow-Wing
  - Elk-Nokasippi
  - Hawk-Yellow-Medicine
  - Long-Prairie
  - Platte-Spunk
  - Redeye
  - Rum
  - Sauk
  - Twin-Cities

Prepared by the Upper Mississippi River Source  
Water Protection Project (UMRSWPP)

# Priority Contaminants of Concern

- List of EPA's Drinking Water Standards.
- Total suspended solids.
- Cryptosporidium.
- Nutrients.
- Pesticides.
- Organic solvents.
- Pharmaceuticals..
- Endocrine-disrupting chemicals.
- Radioactive materials.



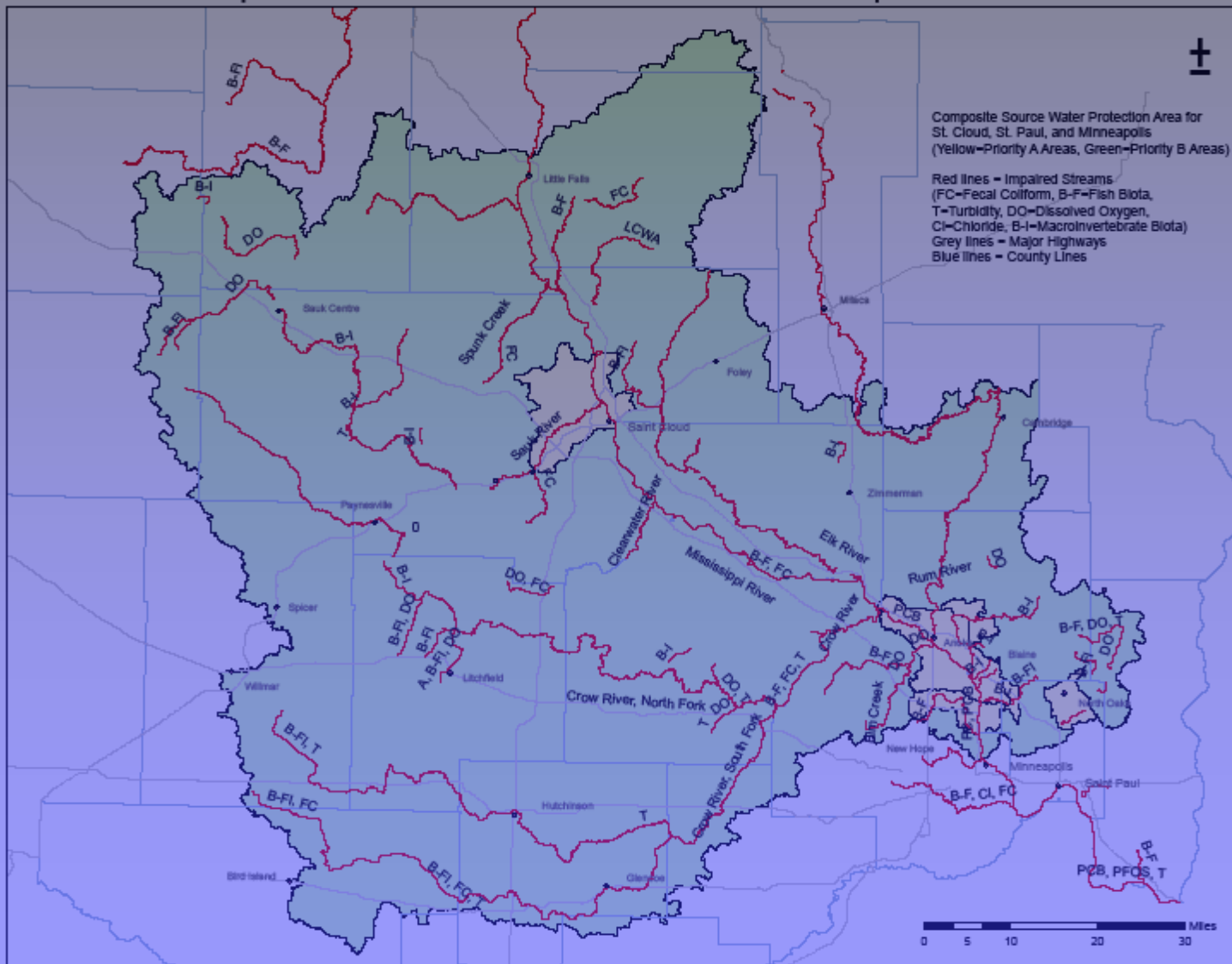
# Reasons for Concern

- High levels of certain contaminants.
- Limitation of water treatment measures.
- Contributes to the formation of disinfection byproducts.
- Lack of monitoring data.
- Lack of knowledge regarding the contaminant, sources and health effects.

# Management Strategies

- Public Education.
- Spill Response.
- Support watershed management.
- Stormwater management.
- TMDL Program.

## Composite Source Water Protection Area and Impaired Streams



# The Challenges

- Balance of competing uses of the river when various entities oversee these uses.
- Communicate the fact that the Mississippi River is a source of drinking water.
- Develop and communicate consist and appropriate messages.
- Integrate the Clean Water Act and the Safe Drinking Water Act.



# QUESTIONS???

